As a prime example of the state of communications in North Carolina, the existing State Highway Patrol's statewide radio communications infrastructure is based on technology which is over forty years old and is extremely limited in capability compared to present technology. Maintenance and support has become a burdensome task as this equipment is so old that replacement parts are no longer stocked by the vendors. Many local governments are facing the same issues.

Current Radio Systems do not allow for state officials to communicate with local agencies and often local agencies can't effectively communicate with officials in neighboring counties. Unfortunately, current and planned investments in incompatible technologies will exacerbate the above problems well into the next century unless statewide action is taken now. Smaller agencies lack the technical and financial resources to effectively procure and manage the 800 MHz trunking technology infrastructure.

The state-of-the-art approach to large scale voice radio communications systems today is based on 800 MHz trunking technology. Trunking enables many users to share fewer channels by using technology which is more efficient use of radio spectrum. When a user makes a call, a frequency is assigned to that user for the duration of the call. At the completion of the call, the frequency is released for the next call. In this architecture, user capacity only becomes a problem when the number of users who want to make calls at any one instance exceeds the number of available frequencies at any given trunked radio transmitter site.

A rule of thumb used in the industry today supports that, based upon the number of radio calls made by public safety officials during a normal day, each channel of a 5 channel trunked radio transmitter site can support the routine radio traffic of 100 users.